

UTILITY  
PATENT APPLICATION  
TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.

35.C14560

First Named Inventor or Application Identifier

TAKEHIRO YOSHIDA

Express Mail Label No.

Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO:

1. ☐ Fee Transmittal Form  
(Submit an original, and a duplicate for fee processing)

6. ☐ Microfiche Computer Program (Appendix)

2. ☒ Specification Total Pages

7. Nucleotide and/or Amino Acid Sequence Submission  
(if applicable, all necessary)

3. ☒ Drawing(s) (35 USC 113) Total Sheets

a. ☐ Computer Readable Copy

b. ☐ Paper Copy (identical to computer copy)

c. ☐ Statement verifying identity of above copies

4. ☒ Oath or Declaration Total Pages

a. ☐ Newly executed (original or copy)

b. ☒ Unexecuted for information purposes

c. ☐ Copy from a prior application (37 CFR 1.63(d))  
(for continuation/divisional with Box 17 completed)  
[Note Box 5 below]

i. ☐ DELETION OF INVENTOR(S)  
Signed Statement attached deleting inventor(s)  
named in the prior application, see 37 CFR  
1.63(d)(2) and 1.33(b).

5. ☐ Incorporation By Reference (useable if Box 4c is checked)  
The entire disclosure of the prior application, from which a copy of the  
oath or declaration is supplied under Box 4c, is considered as being  
part of the disclosure of the accompanying application and is hereby  
incorporated by reference therein.

ACCOMPANYING APPLICATION PARTS

8. ☐ Assignment Papers (cover sheet & document(s))

9. ☐ 37 CFR 3.73(b) Statement ☐ Power of Attorney  
(when there is an assignee)

10. ☐ English Translation Document (if applicable)

11. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS  
Citations

12. ☒ Preliminary Amendment

13. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)

14. ☐ Small Entity Statement(s) ☐ Statement filed in prior application  
Status still proper and desired

15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)

16. ☐ Other: \_\_\_\_\_

17. If a CONTINUING APPLICATION, check appropriate box and supply the requisite information:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No. \_\_\_\_/\_\_\_\_

18. CORRESPONDENCE ADDRESS

☒ Customer Number or Bar Code Label

05514  
(Insert Customer No. or Attach bar code label here)

or ☐ Correspondence address below

NAME

Address

City

State

Zip Code

Country

Telephone

Fax



CLAIMS	(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) CALCULATIONS
	TOTAL CLAIMS (37 CFR 1.16(c))	39-20 =	19	X \$ 18.00 =	\$342.00
	INDEPENDENT CLAIMS (37 CFR 1.16(b))	6-3 =	3	X \$ 78.00 =	\$234.00
	MULTIPLE DEPENDENT CLAIMS (if applicable) (37 CFR 1.16(d))			\$260.00 =	\$260.00
				BASIC FEE (37 CFR 1.16(a))	\$690.00
			Total of above Calculations =		\$1,526.00
	Reduction by 50% for filing by small entity (Note 37 CFR 1.9, 1.27, 1.28).				
	TOTAL =				\$1,526.00

19. Small entity status

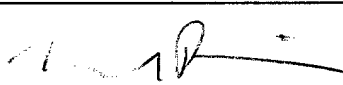
- a. ☐ A Small entity statement is enclosed
- b. ☐ A small entity statement was filed in the prior nonprovisional application and such status is still proper and desired.
- c. ☐ Is no longer claimed.

20. ☒ A check in the amount of \$ 1,526.00 to cover the filing fee is enclosed.

21. ☐ A check in the amount of \$ \_\_\_\_\_ to cover the recordal fee is enclosed.

22. The Commissioner is hereby authorized to credit overpayments or charge the following fees to Deposit Account No. 06-1205:

- a. ☒ Fees required under 37 CFR 1.16.
- b. ☒ Fees required under 37 CFR 1.17.
- c. ☐ Fees required under 37 CFR 1.18.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED	
NAME	Leonard P. Diana (Reg. No. 29,296)
SIGNATURE	
DATE	June 19, 2000

35.C14560

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
 : Examiner: Not Yet Assigned  
TAKEHIRO YOSHIDA ET AL. )  
 : Group Art Unit: NYA  
Application No.: NYA )  
 :  
Filed: Concurrently Herewith )  
 :  
For: COMMUNICATION APPARATUS ) June 19, 2000

Assistant Commissioner for Patents  
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

Prior to calculation of the filing fee, please  
amend the above-identified application as follows:

IN THE CLAIMS

Please amend claims 4, 9, 13, and 18 as follows:

Claim 4, line 1, change "to 3" to --to 2--.

Claim 9, line 1, change "to 8" to --and 8--.

Claim 13, line 1, change "to 12" to --to 11--.

Claim 18, line 1, change "to 17" to --and 17--.

REMARKS

The foregoing amendments are presented to place the claims in proper multiple dependent form. Claims 1-27 are pending in this application.

Favorable consideration and early passage to issue are respectfully requested.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



Attorney for Applicants

Registration No. 449

FITZPATRICK, CELLA, HARPER & SCINTO  
30 Rockefeller Plaza  
New York, New York 10112-3801  
Facsimile: (212) 218-2200

COMMUNICATION APPARATUS

BACKGROUND OF THE INVENTION

Field of the Invention

5           The present invention relates to ring type multi-address communications.

Related Background Art

          In the case of a conventional facsimile equipment,  
transmission of one data to a plurality of addresses  
10       (or destination) has generally been carried out by  
means of multi-address transmission, that is, a  
transmission method, which transmits identical data to  
a plurality of addresses by executing sequential  
facsimile communications with addresses targeted for  
15       transmission. However, since multi-address  
transmission is executed to all the addresses from one  
facsimile equipment, this transmission method has  
resulted in the uneven distribution of communication  
costs among the facsimile equipments, and has had a  
20       problem of the impossibility of receiving from other  
facsimile equipments during the execution of multi-  
address transmission. As one example of the measures  
to solve such a problem, there has been presented a  
ring type multi-address transmission method, which is  
25       designed to sequentially perform transmission from a  
facsimile equipment FAXA to FAXB, from FAXB to FAXC,  
from FAXC to FAXD, and from FAXD to FAXA.

000290"05126550

However, such a ring type multi-address transmission method has had a drawback that it is impossible to determine whether the operator of a facsimile equipment having received data regarding ring type multi-address transmission has seen the data or not. Particularly, in activities of in-town circle meetings, and so on, it is important to verify whether the users of all the addresses have seen the data or not.

10

#### SUMMARY OF THE INVENTION

An object of the invention is to provide a facsimile equipment capable of surely showing data regarding ring type multi-address transmission to the operator of the facsimile equipment having received the data.

15

#### BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a view showing a general constitution of a facsimile equipment according to the preferred embodiments of the invention.

20

Fig. 2 is a view illustrating an example of registration of a sub-address signal and communication specifications corresponding to a memory box in an example of ring type multi-address transmission.

25

Fig. 3 is a view illustrating a memory constitution of a memory 18.

Fig. 4 is a flowchart showing a facsimile transmission control procedure of a facsimile equipment according to a first embodiment of the invention.

5 Fig. 5 is a flowchart showing the facsimile transmission control procedure of the facsimile equipment of the first embodiment.

Fig. 6 is a flowchart showing the facsimile transmission control procedure of the facsimile equipment of the first embodiment.

10 Fig. 7 is a flowchart showing the facsimile transmission control procedure of the facsimile equipment of the first embodiment.

15 Fig. 8 is a flowchart showing the facsimile transmission control procedure of the facsimile equipment of the first embodiment.

Fig. 9 is a flowchart showing the facsimile transmission control procedure of the facsimile equipment of the first embodiment.

20 Fig. 10 is a flowchart showing a facsimile transmission control procedure of a facsimile equipment according to a second embodiment of the invention.

Fig. 11 is a flowchart showing the facsimile transmission control procedure of the facsimile equipment of the second embodiment.

25 Fig. 12 is a flowchart showing a facsimile transmission control procedure according to a third embodiment of the invention.

09597150-062000

5

5

5

5

10

10

10

## 15

20

20

25



000000" 05T 26560

The NCU 2 is connected to a terminal of the telephone line to use a telephone exchange network for data communications, and so on, and adapted to perform connection control of the telephone exchange network, switching to a communication channel and loop holding. The NCU 2 also connects the telephone line 2a to a telephone set 4 side (CML OFF) via a signal line 2b based on control from a bus 26, and connects the telephone line 2a to a facsimile equipment side (CML ON) via a signal line 2c. Usually, the telephone line 2a is connected to the telephone set 4 side.

A hybrid CKT 6 separates a signal transmitted via the telephone line 2a from a transmission system from a signal received via the telephone line 2a from a receiving system. In addition, the hybrid CKT 6 sends out a signal transmitted from an adder CKT 12 to the telephone line 2a through the NCU 2, receives a signal from a partner station through the NCU 2, and sends out the received signal to a modem 8 via a signal line 6a.

The modem 8 performs modulation/demodulation based on ITU-T Recommendations V. 8, V. 21, V. 27ter, V. 29, V. 17, and V. 34, and each transmission mode is specified by means of control of the bus 26. The modem 8 receives a signal transmitted through the bus 26, outputs modulated data to the adder CKT 12 via a signal line 8a, receives a signal from the hybrid CKT 6 via the signal line 6a, and then outputs demodulated data

to the bus 26.

A calling CKT 10 receives telephone number data by means of signal from the bus 26, and outputs a DTMF selection signal to the adder CKT 12 via a signal line 10a.

The adder CKT 12 receives data from the modem 8 via the signal line 8a and data from the calling CKT 10 via the signal line 10a, and outputs the result of addition to the hybrid CKT 6 via a signal line 12a.

A reading CKT 14 is composed of an image pickup device such as a charge coupling device (CCD) or the like, and an optical system. The reading CKT 14 sequentially reads images equivalent to one line of a main scanning direction from a transmitted document, and outputs data regarding the read images to a recording CKT 16. The recording CKT 16 sequentially records each line of data outputted to the bus 26.

A memory 18 is a memory (RAM) for work, and adapted to store raw or coded data regarding read data, and store received data, composite data or the like via the bus 26.

The memory 18 includes a memory for registering a telephone number of own station, and a memory for registering a sub-address and communication specifications corresponding to a memory box. As an exemplary registration of such sub-address signal communication specifications, Fig. 2 shows ring type

00597450-062000

multi-address transmission, for example, ones corresponding to memory boxes in respective facsimile equipments FAXA, FAXB, FAXC and FAXD.

With regard to a memory constitution of the memory 18, as shown in Fig. 3, a telephone number of own station is registered in an address 0; a sub-address and communication specifications corresponding to the memory box in an address 1; and a ring multi-address transmission method for a next station in an address 2. For example, for the FAXB, 03-3111-2222 is registered as a telephone number of own station.

In the described case, in the ring type multi-address transmission of facsimile equipments FAXA to FAXD as shown in Fig. 2, for example, 1234 is registered as a sub-address corresponding to a memory box 01 for each of the facsimile equipment (e.g. FAXB) and, as communication specifications therefor, ring type multi-address transmission for a next station (e.g. FAXC) is registered.

20           An operation unit 20 includes a one-touch dial,  
an abbreviation dial, a ten key, a # key, a start key,  
a set key, a stop key, own station telephone number  
registration key, a specification registration key of a  
memory box, and other function keys, and a display  
25   unit. Key data is outputted to the bus 26. The  
operation unit 20 also receives data outputted to the  
bus 26, and displays the received data.

A central processing unit (CPU) 22 executes overall control for the facsimile equipment, and a later-described facsimile transmission control procedure. A control program thereof is stored in a ROM 24.

Figs. 4 to 9 are flowcharts showing in sequence a facsimile transmission control procedure of the facsimile equipment according to a first embodiment of the invention.

This procedure is now explained by targeting the facsimile equipment FAXB, and the explanation can also be applied to the other facsimile equipments FAXA, FAXC and FAXD.

First, the memory 18 is subjected to initialization via the bus 26 (step S2), the display unit of the operation unit 20 is cleared via the bus 26 (step S4), and the CML of the NCU 2 is turned OFF to connect the telephone line 2a to the telephone set 4 side via the bus 26 (step S6).

Subsequently, the data of the operation unit 20 is entered via the bus 26, and determination is made as to whether the registration of own station telephone number has been selected or not in an address 20 of the memory 18 (step S8). If it is determined that the registration of the own station telephone number has been selected, as the own station telephone number of the memory 18, for example, 03-3111-2222 is registered

via the bus 266 (step S10), and then the process moves to step S12. On the other hand, if the registration has not been selected, then the process moves to step S12 skipping step S10.

5           In step S12, the data of the operation unit 20 is entered via the bus 26, and determination is made as to whether the registration of a sub-address and communication specifications corresponding to a memory box has been selected or not. If it is determined that  
10   the registration of the sub-address and communication specifications corresponding to the memory box has been selected, as the sub-address and communication specifications, for example, a sub-address signal 12324 and ring type multi-address transmission as  
15   communication specifications to a next station FAXC corresponding to a memory box 01 are registered in an address 1 of the memory 18 via the bus 26 (step S14), and then the process moves to step S16. On the other hand, if the registration has not been selected, then  
20   the process moves to step S14 skipping step S16.

          In step S16, via the bus 26, determination is made as to whether the ring type multi-address transmission designation key of the operation unit 20 has been depressed or not. If it is determined that  
25   the ring type multi-address transmission designation key has been depressed, then the CML of the NCU 2 is turned ON to connect the telephone line 2a to the

000000"05746560

facsimile equipment side via the bus 26 (step S18), and calling is made to a next station FAXC via the bus 26 by using the calling CKT 10 (step S20). Then, a pre-procedure is executed to transmit the own station  
5 telephone number stored in the address 0 of the memory 18 as a ring type multi-address transmission start telephone number, and transmit 1234 as a sub-address signal (step S22). Image signal transmission is carried out (step S24), and then after a post procedure  
10 is executed (step S26), the process returns to step S6.

If it is determined in step S16 that the ring type multi-address transmission designation key has not been depressed, then the process moves to step S28, where determination is made via the bus 26 as to whether the ring type multi-address transmission continuation key of the operation unit 20 has been depressed or not. If it is determined in step S28 that the ring type multi-address transmission continuation key of the operation unit 20 has been depressed, the process moves to step S30, where determination is made via the bus 26 as to whether the display unit of the operation unit 20 indicating the presence of data received by ring type multi-address transmission is ON or not. If it is determined in step S30 that the display unit of the operation unit 20 indicating the presence of data received by ring type multi-address transmission is ON, then the process moves to step S32,

If it is determined in step S32 that the printing of the memory-received data has not been finished, "DATA MEMORY-RECEIVED BY RING TYPE MULTI-  
25 ADDRESS TRANSMISSION CANNOT BE TRANSFERRED BEFORE PRINTOUT THEREOF TO NEXT FAX STATION" displayed on the

If it is determined in step S32 that the printing of the memory-received data has not been finished, "DATA MEMORY-RECEIVED BY RING TYPE MULTI- ADDRESS TRANSMISSION CANNOT BE TRANSFERRED BEFORE PRINTOUT THEREOF TO NEXT FAX STATION" displayed on the

5                    If it is determined in step S30 that there is no display indicating the presence of data received by the ring type multi-address transmission on the display unit, then "TO-BE-TRANSFERRED DATA MEMORY-RECEIVED BY RING TYPE MULTI-ADDRESS TRANSMISSION IS ABSENT" is  
10                    displayed on the not-shown display unit via the bus 26 (step S50), and the process returns to step S6. The display in step S50 should be erased by actuation of any one of the keys.

If it is determined in step S28 that the ring type multi-address transmission continuation key of the operation unit 20 has not been depressed, then the process moves to step S5, where determination is made as to whether the ring type multi-address transmission received data printing key of the operation unit 20 has been depressed or not via the bus 26. If it is determined that the ring type multi-address transmission received data printing key of the operation unit 20 has been depressed, then the process moves to step S54, where determination is made as to whether the display unit of the operation unit 20 indicating the presence of data received by ring type multi-address transmission is ON or not via the bus 26.



```

5      printed out (step S56), and the process returns to step
      S6. If the display unit is not ON, "TO-BE-PRINTED DATA
      MEMORY-RECEIVED BY RING TYPE MULTI-ADDRESS TRANSMISSION
      IS ABSENT" is displayed on the not-shown display unit
      via the bus 26 (step S58), and then the process returns
10     to step S6.

```

15

25

First, in a pre-procedure, the presence of the receiving function of a sub-address signal is notified

to a partner facsimile station (S66), and then determination is made as to whether a sub-address signal has been received from the partner station or not (step S68). If it is determined that the sub-  
5 address signal has not been received, then an image signal is received/recorded (S70). After the execution of a post procedure, the process returns to step S6.

If the presence of the received sub-address signal is determined in step S68, then the process  
10 moves to step S74, where determination is made as to whether the sub-address signal is 1234 or not. If it is determined that the sub-address signal is not 1234, reception processing corresponding to the sub-address signal is executed (step S76), and the process returns  
15 to step S6. On the other hand, if the sub-address signal is determined to be 1234, then an image signal is memory-received (step S78) and, after the execution of a post procedure (step S80), the CML of the NCU 2 is turned OFF to connect the telephone line 2a to the  
20 telephone set 4 side via the bus 26 (step S82). Determination is then made as to whether the received ring type multi-address transmission start telephone number (received by a procedure signal) coincides with the telephone number of own station or not (step S84).

25 If it is determined in step S84 that the received ring type multi-address transmission start telephone number does not coincide with the telephone

000000"0574550

number of own station, then the display unit of the operation unit 20 indicating the presence of data received by ring type multi-address transmission is turned ON via the bus 26 (step S86), and the process returns to step S6. On the other hand, if coincidence is determined, then the display unit of the operation unit 20 indicating the end of ring type multi-address transmission is turned ON via the bus 26 (step S88), and the process returns to step S6. The display in step S88 should be erased by actuation of any one of the keys.

According to the first embodiment of the invention, determination is made as to the specifying of ring type multi-address transmission by the sub-address signal (steps S68 and S74), the received data is memory-received if the ring type multi-address transmission is specified at the time of reception (YES in step S74) and, after the actual printing-out of the memory-received data (YES in step S32), the data is transferred to the next facsimile station (step S38). Accordingly, the transmission of the memory-received data is permitted only after its printing-out, i.e., after the operator of the facsimile equipment reads the data. Thus, it can be assured that the operator of the facsimile equipment see the data received by the ring type multi-address transmission.

(Embodiment 2)

Figs. 10 and 11 are flowcharts showing in sequence a facsimile transmission control procedure of a facsimile equipment according to a second embodiment of the invention. Description of portions like those  
5 of the first embodiment will be omitted, and only different portions will be described.

The second embodiment is different from the first embodiment in that either one of the following cases is selected: transmission of memory-received data  
10 by specification from an operator, and automatic transmission to a next facsimile station after the end of the memory-received data. Other than this point, the second embodiment is similar to the first. Figs. 10 and 11 show only the foregoing difference.

15 In Fig. 10, after the processing in step S6 of Fig. 4, the data of the operation unit 20 is entered via the bus 26, and determination is made as to whether a ring type multi-address transmission method to a next station has been registered or not via the bus 26 (step  
20 S102). If the selection is determined, then via the bus 26, transfer by the operator or auto-transfer after the printing-out of the memory-received data as means of ring type multi-address transmission for a next station is registered in the address 2 of the memory  
25 18, and the process moves to step S8 of Fig. 4. If no selection is determined, then the process moves to step S8 of Fig. 4 skipping step S104. Thus, transmission by

000290-05776550

In Fig. 11, after the end of the processing in  
step S56 of Fig. 7, the data of the address 2 of the  
memory 18 is entered via the bus 26, and determination  
is made as to whether auto-transfer to the next station  
FAXC after the printing-out of the memory-received data  
has been selected or not (step S110). If the selection  
of auto-transfer is determined, then the memory-  
received data is automatically transmitted to the next  
station FAXC by executing processing of steps S34 to  
S46 of Fig. 5 and thereafter. On the other hand, if no  
selection of auto-transfer is determined, then the  
process moves to step S6 of Fig. 4.

20           Moreover, since the transmission of the memory-  
received data to the next station by specification from  
the operator or the transmission to the same after the  
printing-out of the memory-received data can be  
selected, the transmission of the memory-received data  
25       can be performed manually or automatically based on  
selection made by the operator. Thus, it is possible  
to improve usability of the facsimile equipment.

(Embodiment 3)

In the first and second embodiments, the data received by the ring type multi-address transmission is stored in the memory and, under the condition that the user has printed out the data, transmission of the data to the next station is permitted or executed.

However, the problem of cutting-off of the ring type multi-address transmission in the midway has occurred if a member of the group for the ring type multi-address transmission is not at home for a long time.

Therefore, an object of a third embodiment is to provide an apparatus capable of uniformly distributing communication costs, verifying that the user of the group of multi-address transmission sees received data, and transferring the data to a next station even if the user of the group is not at home for a long time.

In the third embodiment, portions like those of the first embodiment are denoted by like reference numerals, and description thereof will be omitted.

In the third embodiment, the memory 18 of Fig. 1 includes a memory provided to register a nickname, a sub-address signal, and the telephone number of a next station corresponding to a ring type multi-address transmission number, and store the time, the date, the hour and minute of ring type multi-address transmission reception.

Then, after the execution of ring type multi-address reception, its time is stored, the presence of data received by ring type multi-address transmission is displayed, and transfer to a next station is executed based on transfer selection of the data received by the ring type multi-address transmission made by the user. On the other hand, if the selection of the data received by the ring type multi-address transmission is not selected even after the passage of specified time, then the date received by the ring type multi-address transmission is forcibly printed out, and transfer of the data received by the ring type multi-address transmission to the next station is executed. In this case, the transfer to the next station is written in the printed data as the data received by the ring type multi-address transmission.

25           After the start of processing (step S100),  
first, the memory 18 is subjected to initialization via  
the bus 26 (step S102). The display unit of the

operation unit 20 is cleared via the bus 26 (step S104). Then, the CML of the NCU 2 is turned OFF via the bus 26 (step S106).

Subsequently, the data of the operation unit 20  
5 is entered via the bus 26, and determination is made as to whether registration in the memory 18 has been selected or not (step S108). If selection of the registration in the memory 18 is determined, a nickname, a sub-address signal and the telephone number  
10 of a next station corresponding to a ring type multi-address transmission number are registered in the memory 18 via the bus 26 (step S110). For example, corresponding to a ring type multi-address transmission number 01, transfer for kindergarten circulation  
15 (nickname), 1234 (sub-address signal) and 03-3111-1234 (telephone number of next station) is registered. On the other hand, no selection of registration in the memory 18 is determined in step S108, then the process moves to step S112.

20 The data of the operation unit 20 is entered via the bus 26, and determination is made as to whether ring type multi-address transmission start has been selected or not (step S112). If the selection of the ring type multi-address transmission start is  
25 determined, then a nickname for performing ring type multi-address transmission, e.g., kindergarten circulation, is entered (step S114). The CML of the

000000" 05T 26560



5

10

15

20

25

5 transmission is determined, then from the data received by the ring type multi-address transmission, the nickname to be transferred, e.g., kindergarten circulation, is entered (step S132).

20           Determination is made as to whether there have  
been any communication errors or not (step S146). If  
no communication errors are determined, all the  
transferred data received by the ring type multi-  
address transmission are erased from the memory (step  
25 S148). On the other hand, if the occurrence of a  
communication error is determined, "ERROR OCCURS IN  
TRANSFER OF DATA RECEIVED BY RING TYPE MULTI-ADDRESS

5 In step S152, determination is made as to the presence of any data received by the ring type multi-address transmission 24 hours before. If the presence of data received 24 hours before is determined, for example, if one data  $\alpha$  of the kindergarten circulation received by the ring type multi-address transmission 24  
10 hours before is present (step S154), then the CML of the NCU 2 is turned ON via the bus 26 (step S156). Further, calling is made to the telephone number "03-3111-1234" via the bus 26 by using the calling CKT 10  
15 (step S158), and a pre-procedure is executed (step S160). In the pre-procedure, a sub-address "1234" is transmitted. Then, after the reception, the data  $a$  received by the ring type multi-address transmission 24 hours before is transmitted (step S162). A post  
20 procedure is executed (step S164), and the CML of the NCU 2 is turned OFF via the bus 26 (step S166).

On the other hand, if no communication errors are determined, then the transferred data received by

the ring type multi-address transmission is printed out, and information that "THIS DATA IS TRANSMITTED BECAUSE OF ELAPSE OF 24 HOURS AFTER RECEPTION THEREOF BY RING TYPE MULTI-ADDRESS TRANSMISSION" is added to  
5 the first page of the print (step S170). Then, the process returns to step S148.

On the other hand, if it is determined in step S152 that there are not data received 24 hours before, then determination is made as to the selection of  
10 reception (step S172). If no selection of reception is determined, other processing is executed (step S174), and then the process returns to step S106. On the other hand, if the selection of reception is determined, then the CML of the NCU 2 is turned ON via  
15 the bus 26 (step S176), and a pre-procedure is executed (step S178). In the pre-procedure, the presence of a function of receiving the sub-address signal is notified.

Then, determination is made as to the reception  
20 of the sub-address signal (step S180). If no reception of the sub-address signal is determined, then receiving/recording of an image signal is executed (step S182), and a post procedure is carried out (step S184). On the other hand, if the reception of the sub-  
25 address signal is determined, then determination is made as to whether the sub-address signal is "1234" or not (step S186). If the sub-address signal is not

000230" 05T/5560

On the other hand, if the sub-address signal is "1234", then an image signal is memory-received corresponding to the nickname (kindergarten circulation) (step S190). A post procedure is executed (step S192), and the CML of the NCU 2 is turned OFF via the bus 26 (step S194). Corresponding to the data just received by the ring type multi-address transmission, the date and time of the end of reception are stored in the memory 18 (step S196), and the process returns to step S106.

As apparent from the foregoing, with the facsimile equipment of the embodiment, when the transfer of the data received by the ring type multi-address transmission to the next station is executed based on selection made by the user, if the transfer of the data received by the ring type multi-address transmission is not selected even after the passage of specified time, the data received by the ring type multi-address transmission is forcibly printed out, and thereby ring type multi-address transmission to the next station can be executed.

25           Also, when the transfer of the data received by  
the ring type multi-address transmission is normally  
finished, the data received by the ring type multi-

Furthermore, if the transfer of the data received by the ring type multi-address transmission is not selected even after the passage of specified time, the date thereof is forcibly printed out and, when ring type multi-address transmission to the next station is executed, the end of the transfer of the data received by the ring type multi-address transmission to the next station can be written in the printed information.

Any equipment used in the group performing ring type multi-address transmission can be used as long as it has a facsimile function. Other than a dedicated facsimile equipment, a personal computer having a facsimile function can be used.

Needless to say, the invention can be applied to a case where ring type multi-address transmission is achieved by supplying a program to a facsimile  
25 equipment. In this case, a storage medium storing a program represented by software provided to achieve the invention is read by the equipment, and thereby the

equipment can receive the effect of the invention.

Fig. 19 is a view showing a memory map of the ROM 24 as a storage medium. The ROM 24 stores facsimile transmission control program modules, and so on, shown in the flowcharts of Figs. 12 to 18. As a storage medium for supplying such a program module, other than the ROM, for example, a floppy disk, a hard disk, a CD-ROM, a nonvolatile memory card or the like can be used.

WHAT IS CLAIMED IS:

1. A communication apparatus comprising:

multi-address transmission means for executing  
ring type multi-address transmission in a group of the  
5 communication apparatuses; and

determination means for making determination as  
to specifying of the ring type multi-address  
transmission,

wherein, when the ring type multi-address  
10 transmission is specified, said multi-address  
transmission means memory-receives received data and  
transmits the memory-received data to a next station  
after the data is actually printed out.

15 2. A communication apparatus according to claim  
1, wherein said multi-address transmission means  
transmits the memory-received data to the next station  
based on specification from an operator.

20 3. A communication apparatus according to claim  
1 or 2, wherein said multi-address transmission means  
transmits the memory-received data to the next station  
after the data is printed out, based on specification  
from the operator.

25 4. A communication apparatus according to any  
one of claims 1 to 3, wherein said multi-address

000000" 05726560



transmission means includes selection means for  
selecting, based on specification from the operator,  
transmission of the memory-received data to the next  
station, alternatively transmission of the memory-  
5 received data to the next station after the data is  
printed out.

5. A communication apparatus designed to  
perform ring type multi-address transmission by  
10 transferring received data to a next station,  
comprising:

receiving means for receiving data sent by the  
multi-address transmission;

selection means for selecting transfer/non-  
15 transfer of the received data to the next station based  
on instruction from a user; and

transferring means for transferring the received  
data to the next station if the transfer to the next  
station is selected based on the instruction from the  
20 user,

wherein said transferring means forcibly  
transfers the received data to the next station if the  
transfer to the next station is in an unselected state  
for a specified period by instruction from the user.  
25

6. A communication apparatus according to claim  
5, further comprising:

5

10

15

20

25

9. A communication apparatus according to any one of claims 6 to 8, wherein said printing means

5

10

15

20

25

12. A communication method according to claim 10 or 11, wherein said multi-address transmission step transmits the memory-received data to the next station after the data is printed out, based on specification from the operator.

13. A communication method according to any one  
of claims 10 to 12, wherein said multi-address  
transmission step includes a selection step of  
selecting, based on specification from the operator,  
5 transmission of the memory-received data to the next  
station, alternatively transmission of the memory-  
received data to the next station after the data is  
printed out.

10 14. A communication method designed to perform  
ring type multi-address transmission by transferring  
received data to a next station, comprising the steps  
of:

receiving data sent by the multi-address  
15 transmission;

selecting transfer/non-transfer of the received  
data to the next station based on instruction from a  
user; and

transferring the received data to the next  
20 station if the transfer to the next station is selected  
based on the instruction from the user,

wherein said transferring step forcibly  
transfers the received data to the next station if the  
transfer to the next station is in an unselected state  
25 for a specified period by instruction from the user.

15. A communication method according to claim

000299-05726560

5

10

wherein if data sent by the multi-address transmission is received, said storing step stores time of reception thereof, and said displaying step displays presence of the received data, and if the transfer to the next station is in an unselected state for a specified period by instruction from the user, said printing step forcibly prints the received data.

15

20

erasing the transferred data stored in the storing step if the transfer of the received data is normally finished.

25

transmission and the transfer of the received data to the next station simultaneously when executing the forcible printing of the received data.

5           19. A storage medium to store a computer program for the implementation of a communication method comprising the steps of:

          executing ring type multi-address transmission in a group of the communication apparatuses; and

10           making determination as to specifying of the ring type multi-address transmission,

          wherein, when the ring type multi-address transmission is specified, said multi-address transmission step memory-receives received data and  
15           transmits the memory-received data to a next station after the data is actually printed out.

          20. A storage medium according to claim 19, wherein said multi-address transmission step transmits  
20           the memory-received data to the next station based on specification from an operator.

          21. A storage medium according to claim 19 or 20, wherein said multi-address transmission step  
25           transmits the memory-received data to the next station after the data is printed out, based on specification from the operator.

000250"05T46550

22. A storage medium according to any one of claims 19 to 21, wherein said multi-address transmission step includes a selection step of selecting, based on specification from the operator, transmission of the memory-received data to the next station, alternatively transmission of the memory-received data to the next station after the data is printed out.

10 23. A storage medium designed to perform ring type multi-address transmission by transferring received data to a next station, comprising the steps of:

receiving data sent by the multi-address transmission;

15 selecting transfer/non-transfer of the received data to the next station based on instruction from a user; and

transferring the received data to the next station if the transfer to the next station is selected based on the instruction from the user,

20 wherein said transferring step forcibly transfers the received data to the next station if the transfer to the next station is in an unselected state for a specified period by instruction from the user.

25

24. A storage medium according to claim 23,

```

displaying presence/absence of the received
data;
```

```
5      printing the stored data,
```

10

15

starting the multi-address transmission; and  
registering data regarding the next station.

20

erasing the transferred data stored in the storing step if the transfer of the received data is normally finished.

25



transmission and the transfer of the received data to the next station simultaneously when executing the forcible printing of the received data.

## ABSTRACT OF THE DISCLOSURE

There is disclosed a communication apparatus designed to assure the execution of ring type multi-address data transmission. In order to ensure that a user see a received image, transfer to a next station is not carried out until the receive image is printed out. With the passage of specified time after the reception of the image, transfer is executed to the next station.

10

FIG. 1

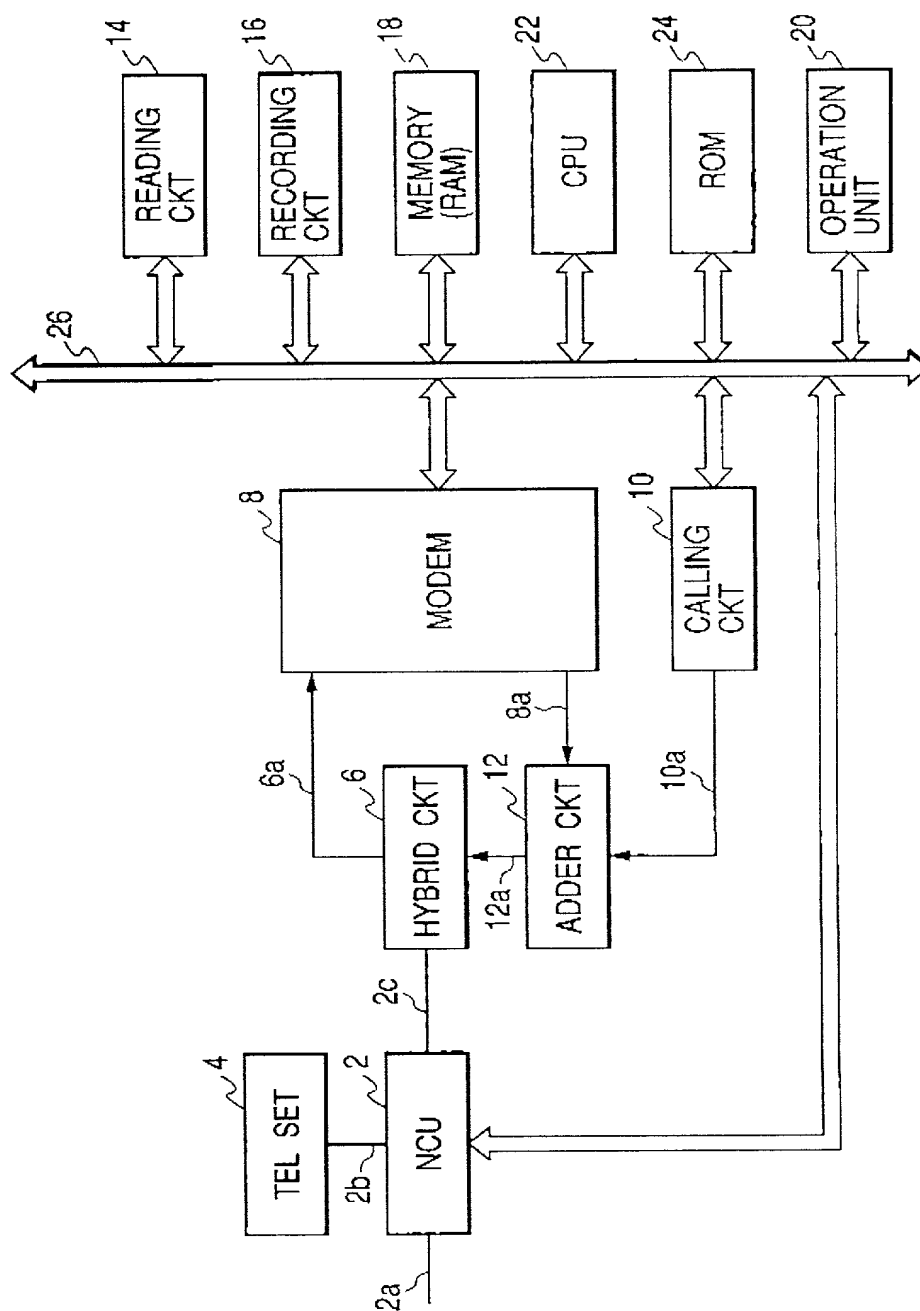


FIG. 2

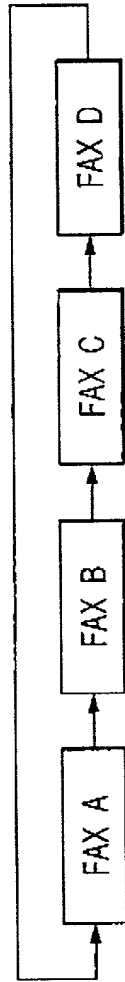
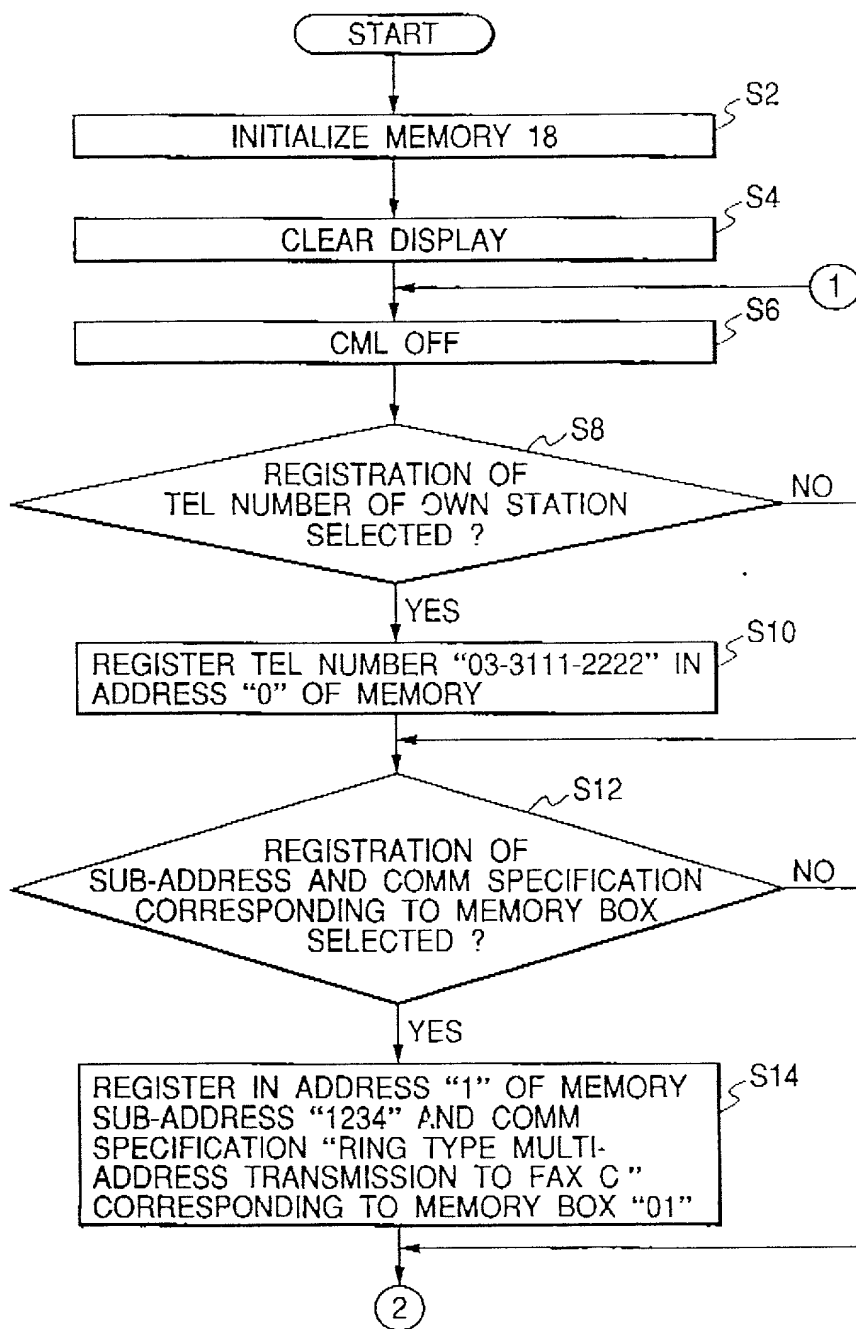


FIG. 3

ADDRESS "0"	TSI (TEL NUMBER)
ADDRESS "1"	SUB-ADDRESS AND COMM SPECIFICATION CORRESPONDING TO MEMORY BOX
ADDRESS "2"	METHOD OF RING TYPE MULTI-ADDRESS TRANSMISSION FOR NEXT STATION

FIG. 4



000290" 05T 26560

FIG. 5

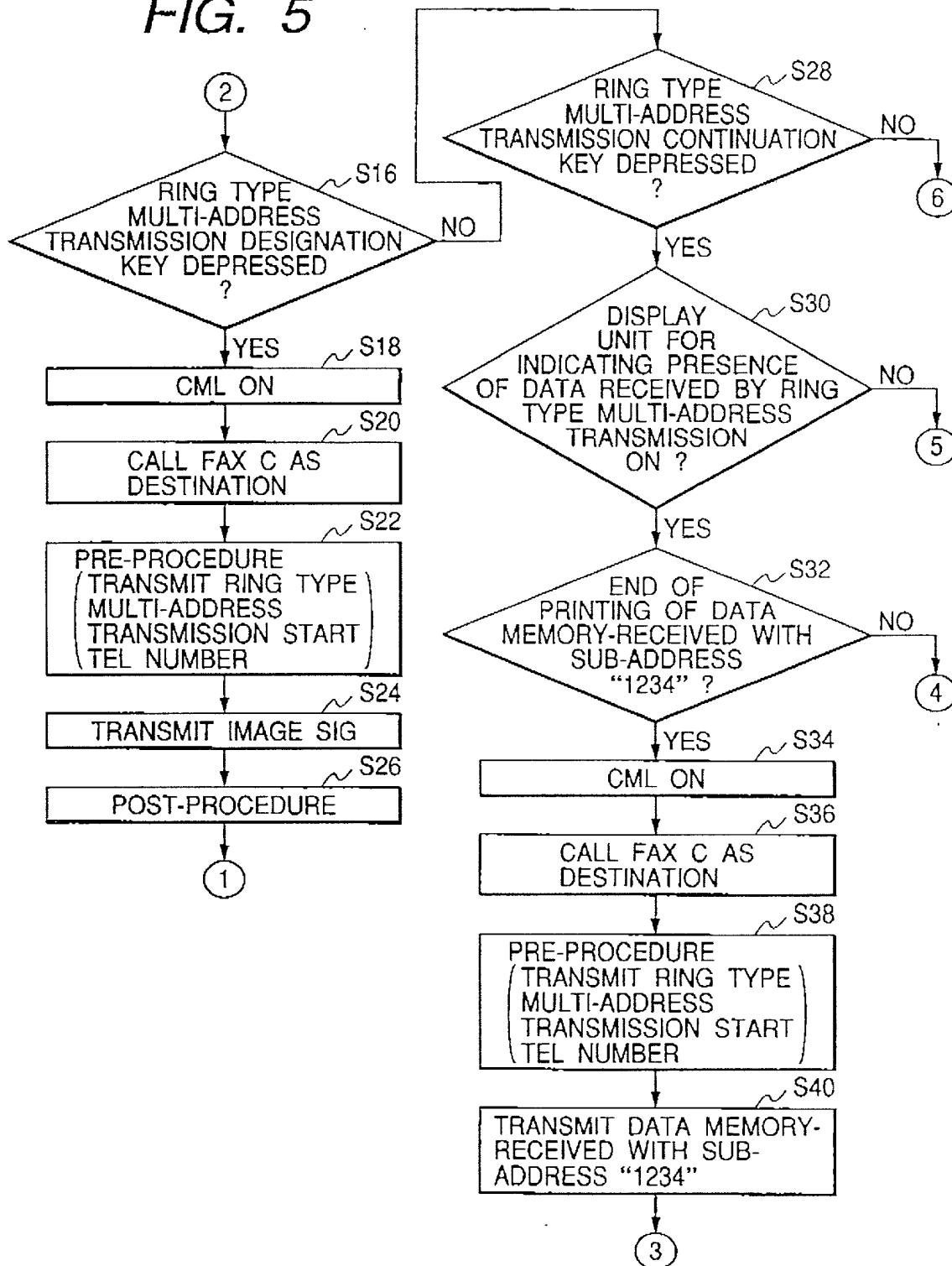


FIG. 6

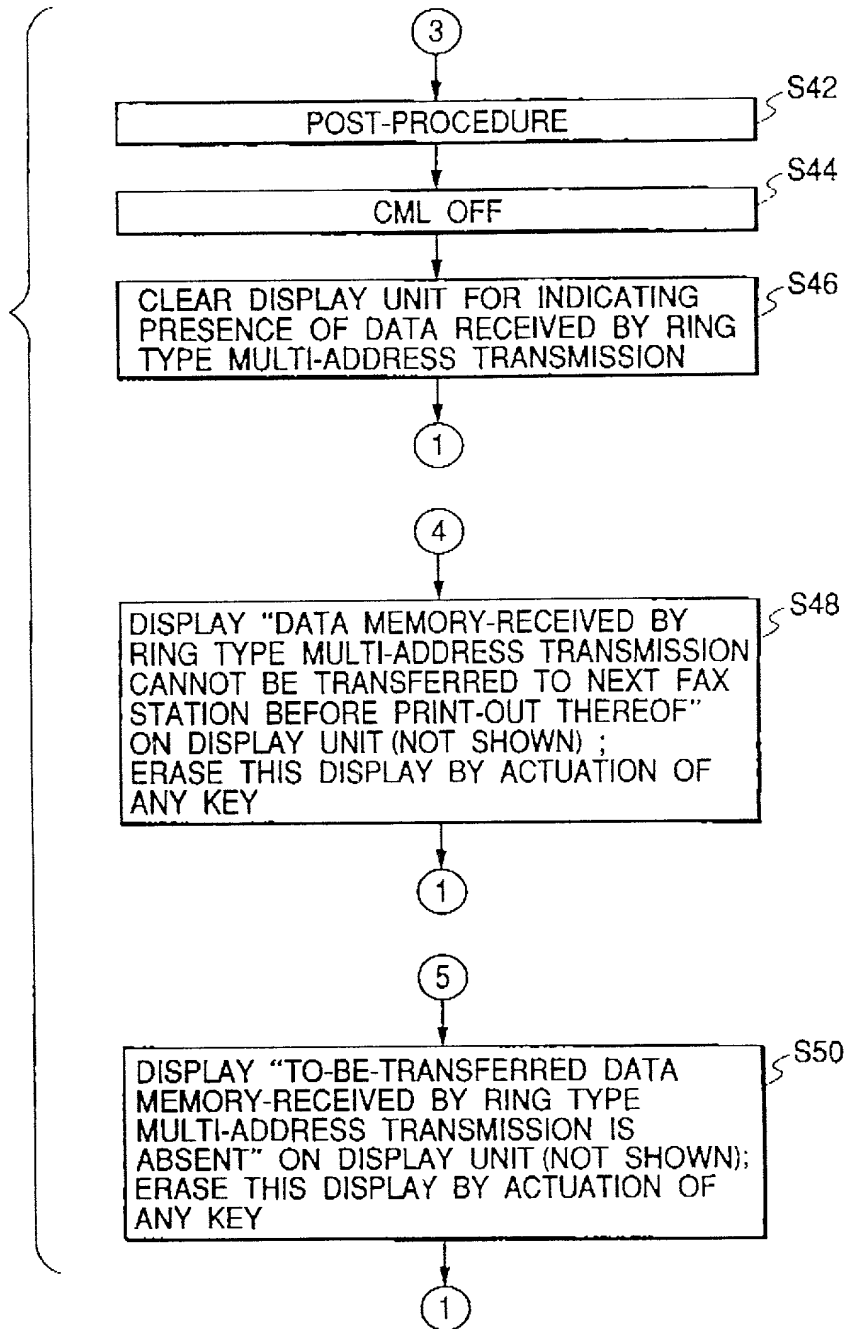


FIG. 7

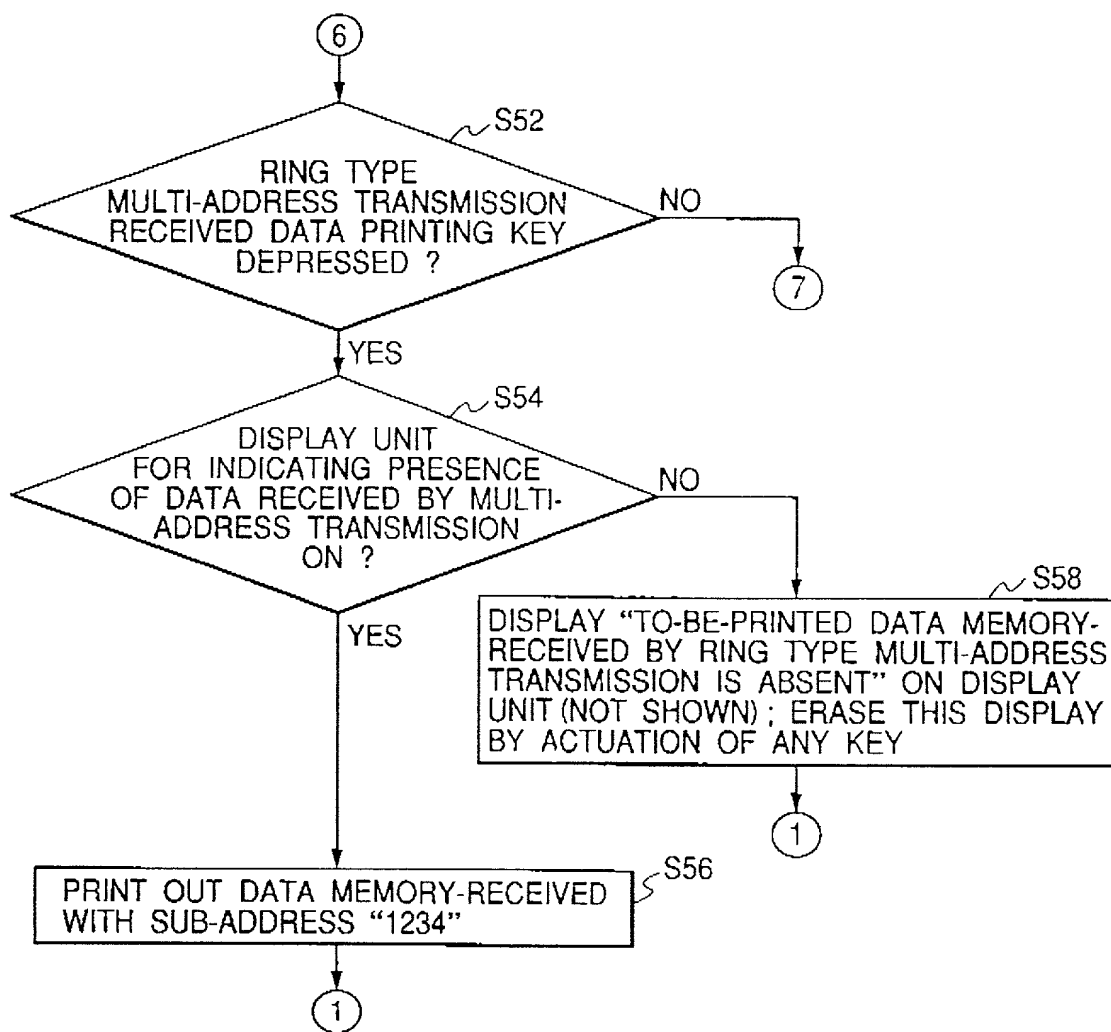




FIG. 8

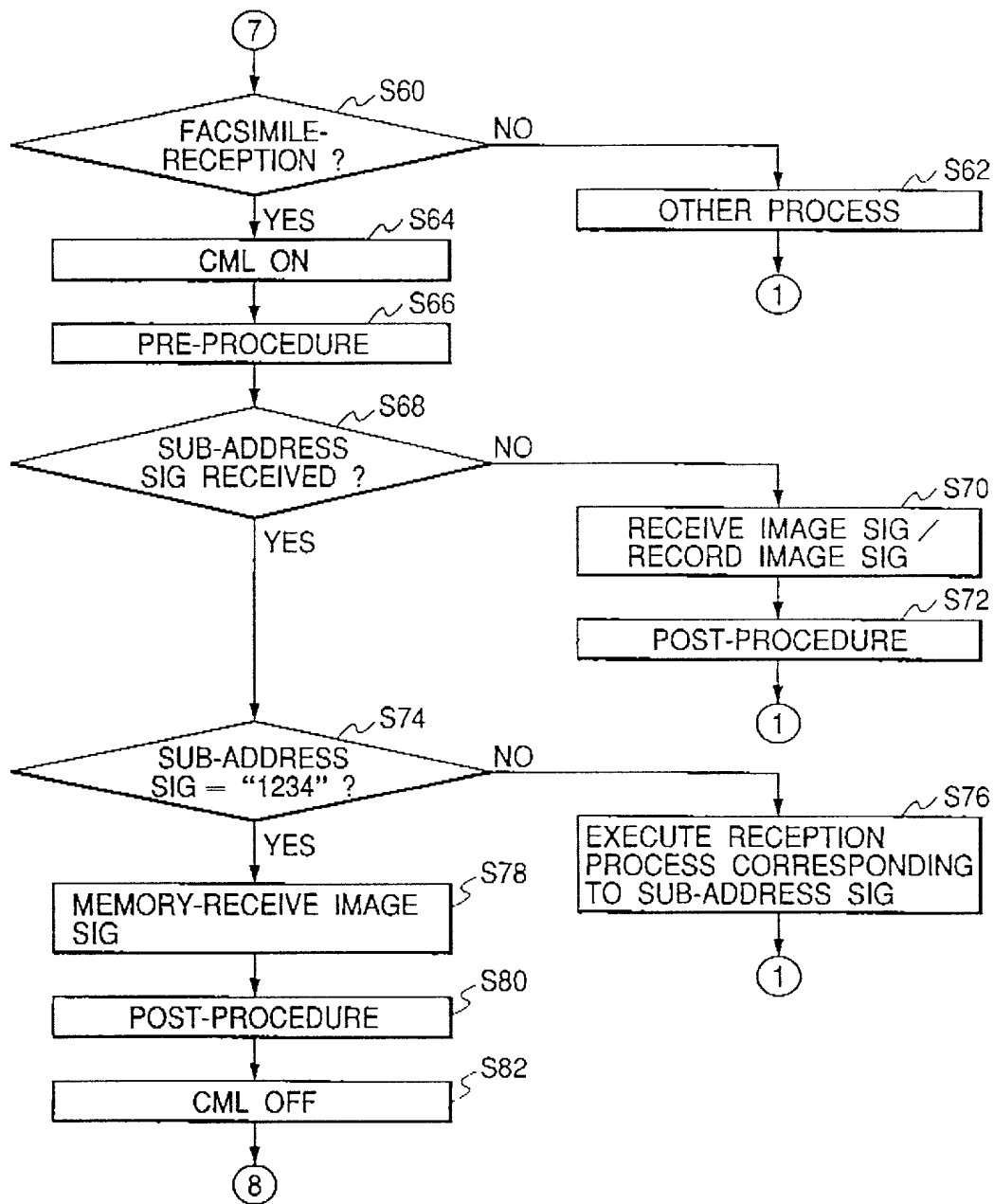


FIG. 9

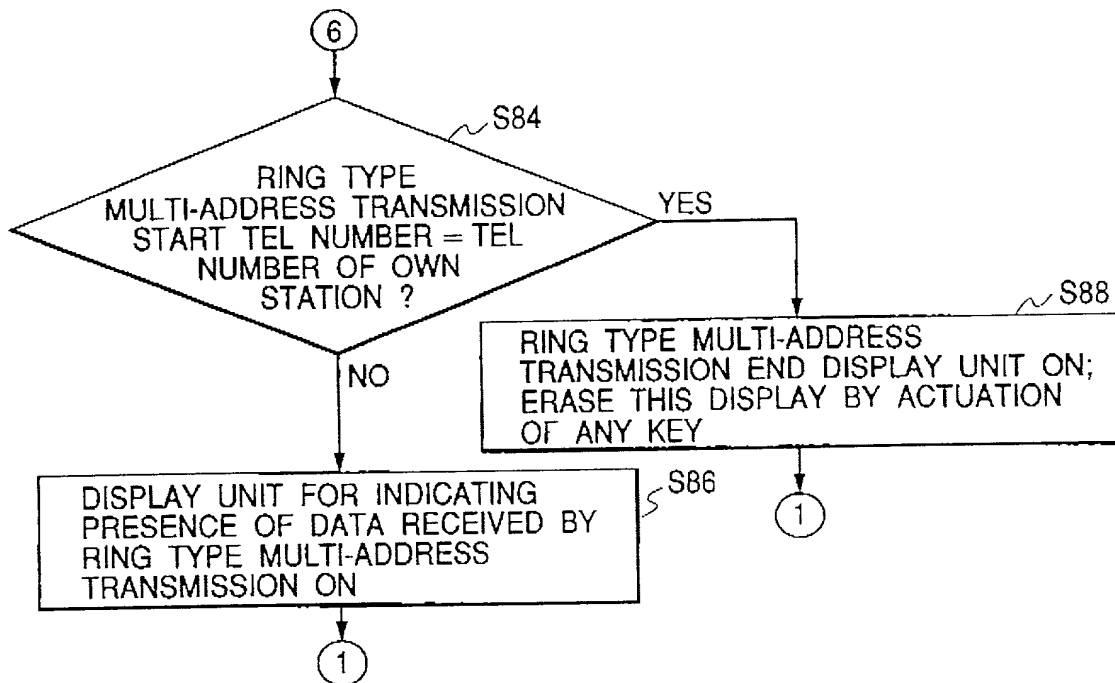
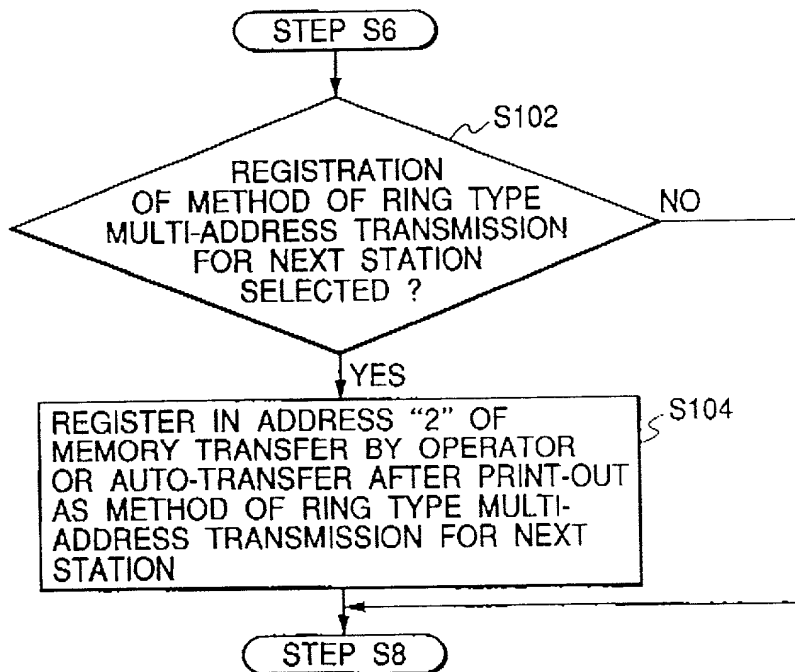


FIG. 10



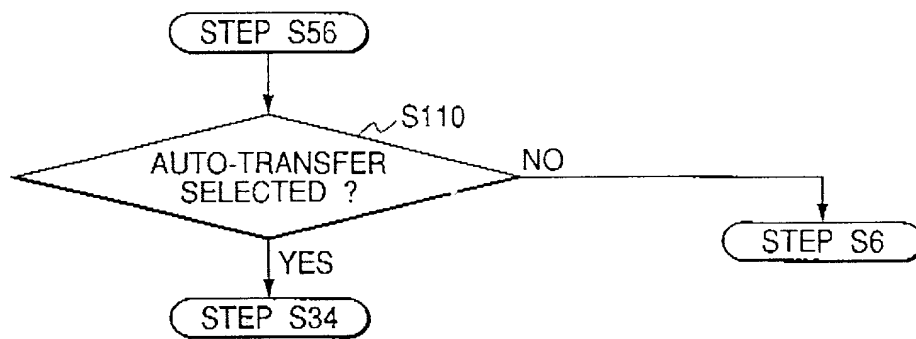
*FIG. 11*

FIG. 12

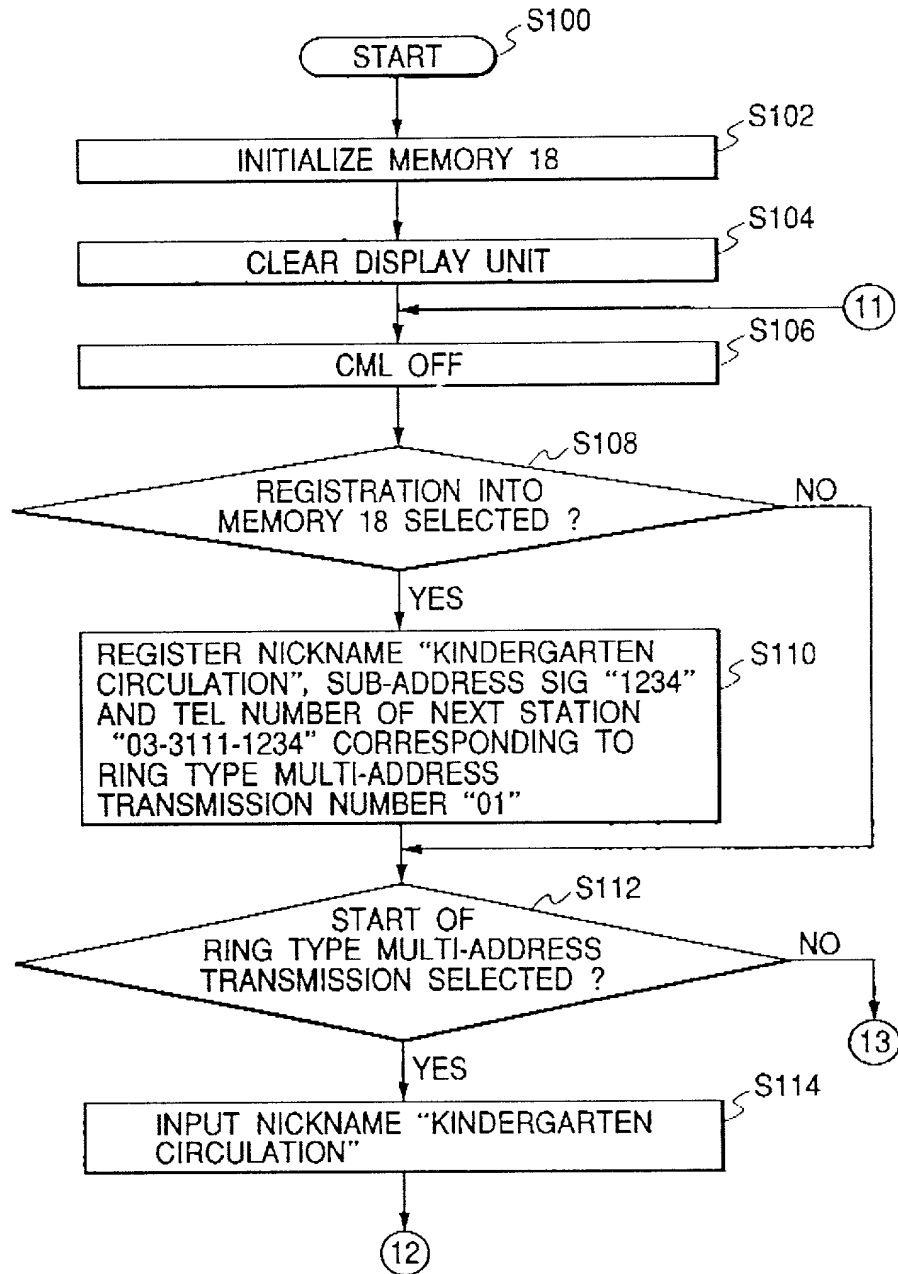
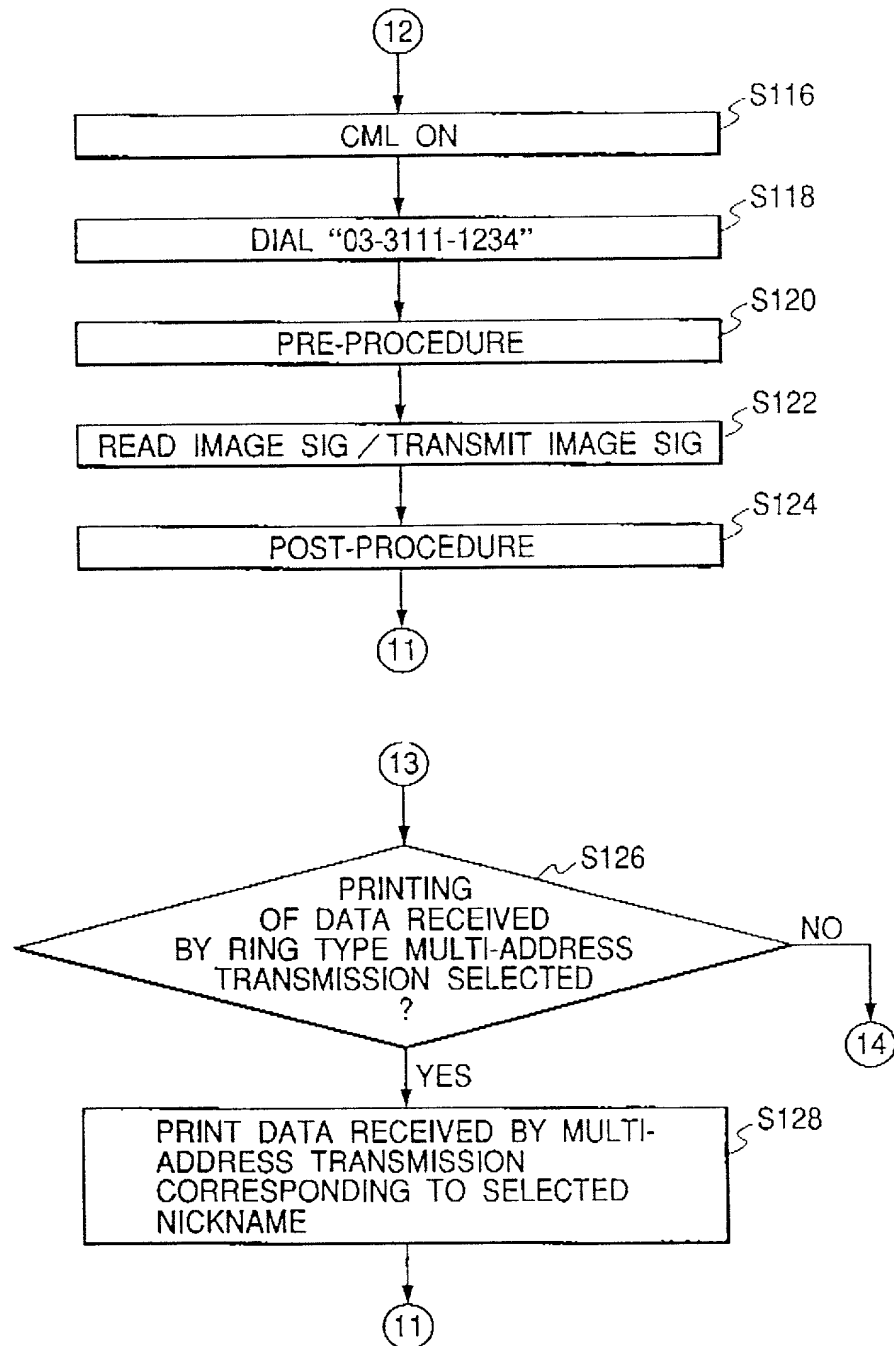


FIG. 13



000290" 0574560

FIG. 14

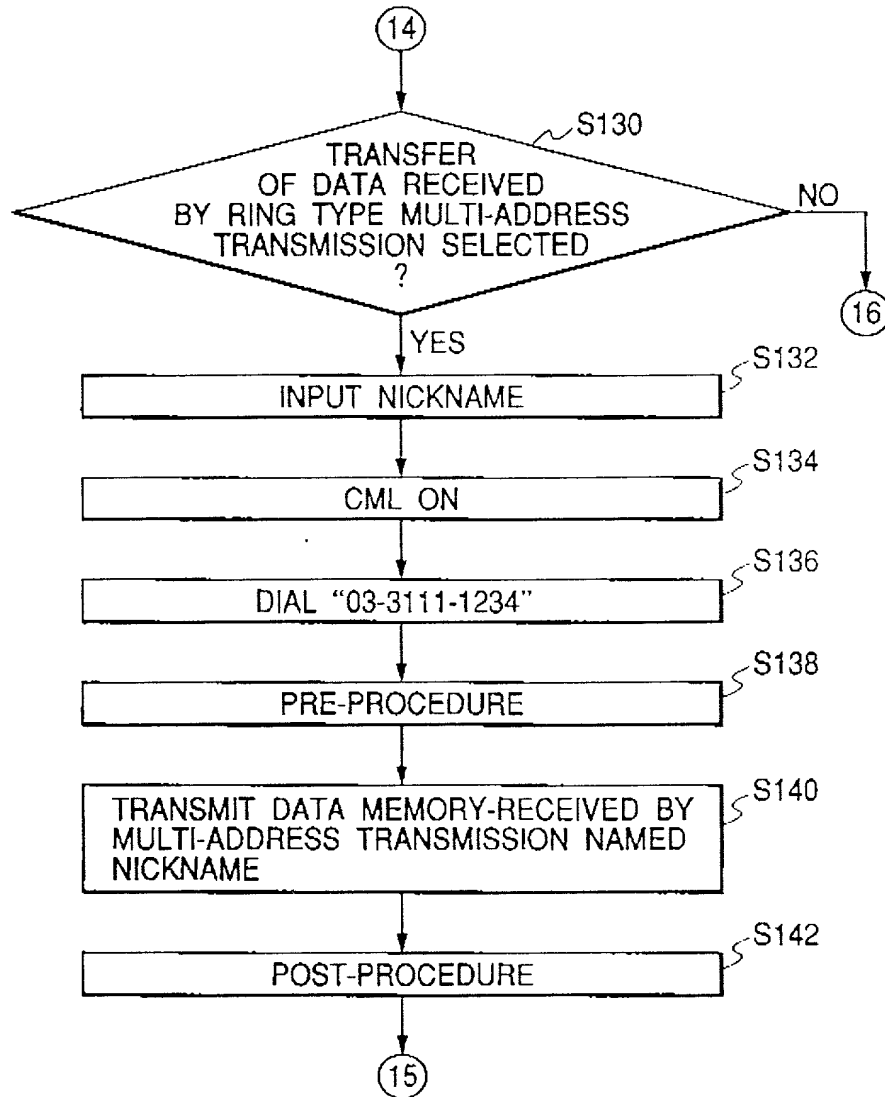
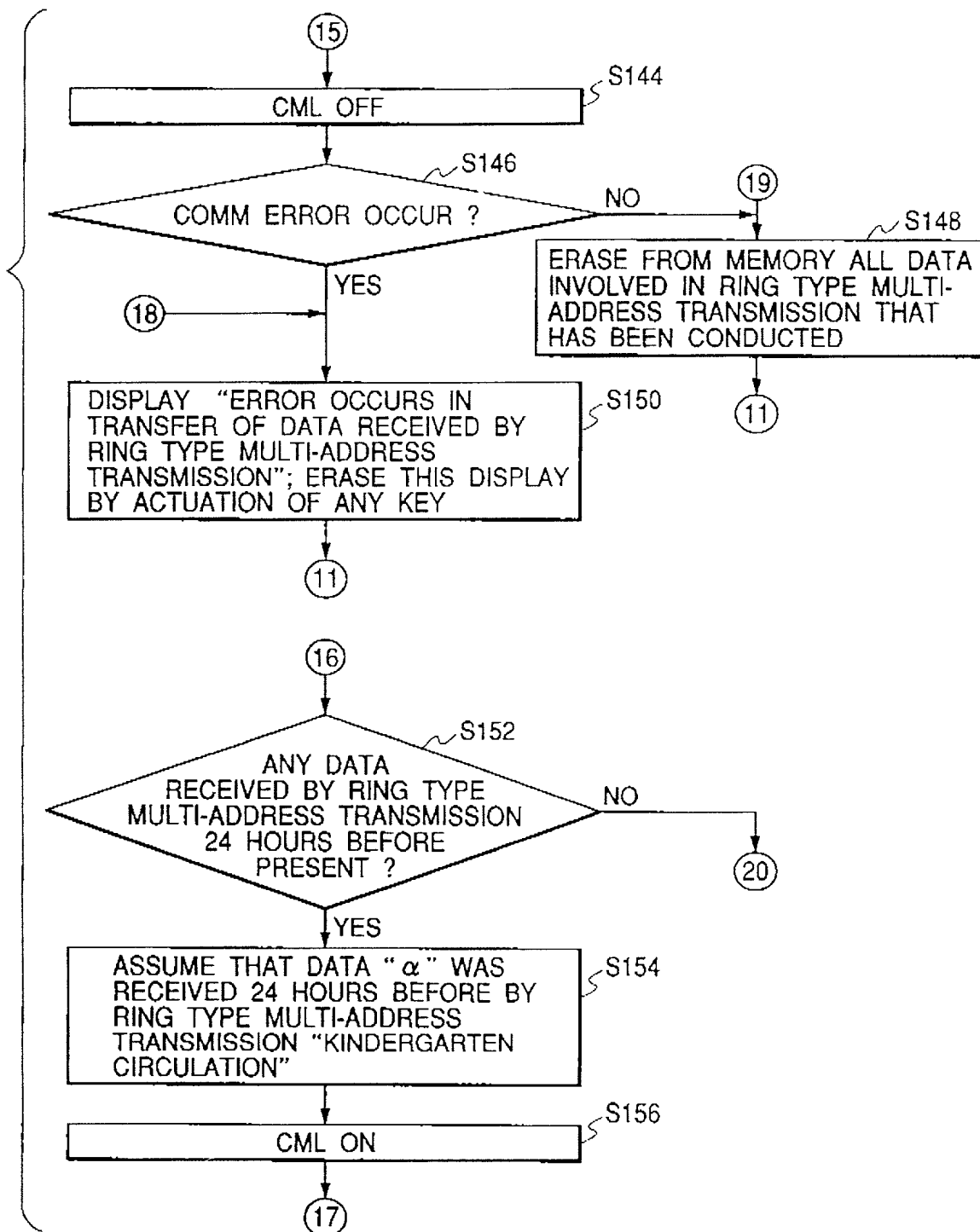


FIG. 15



000000-000000-000000

FIG. 16

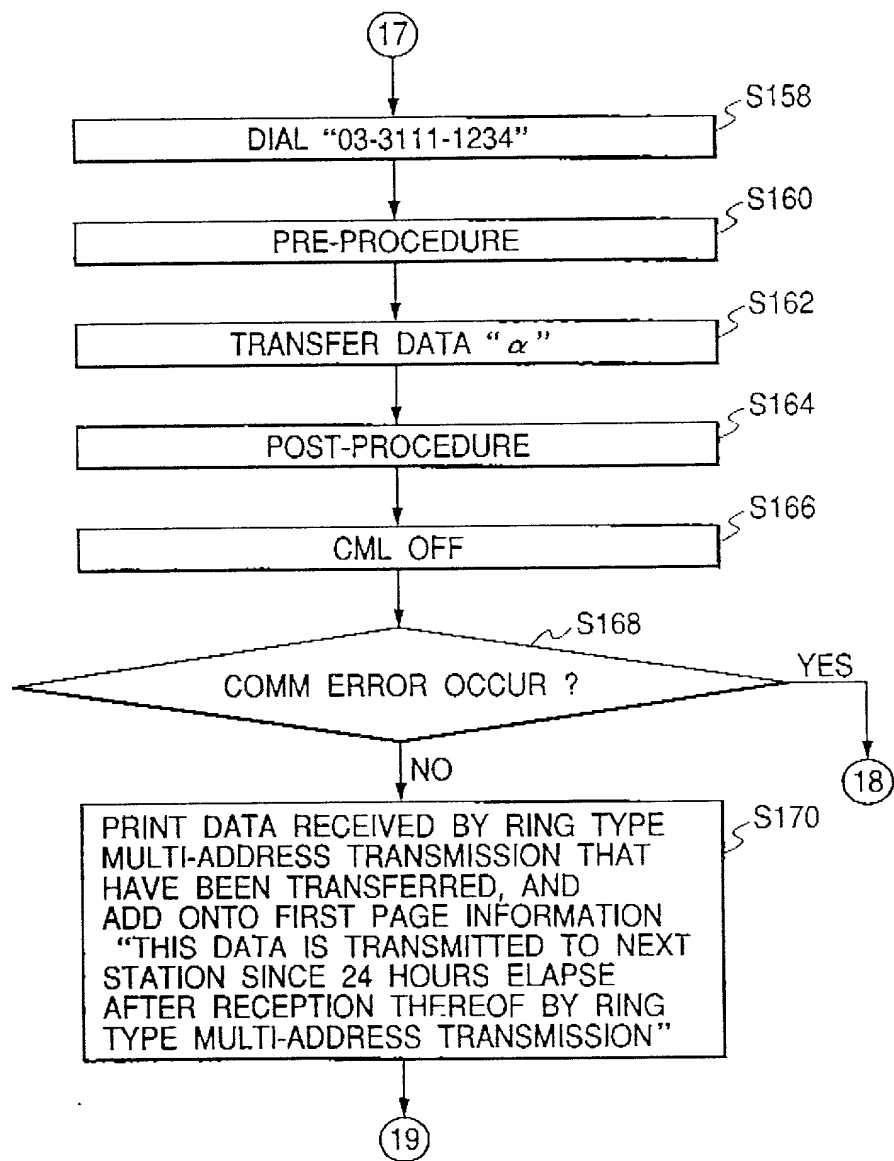




FIG. 17

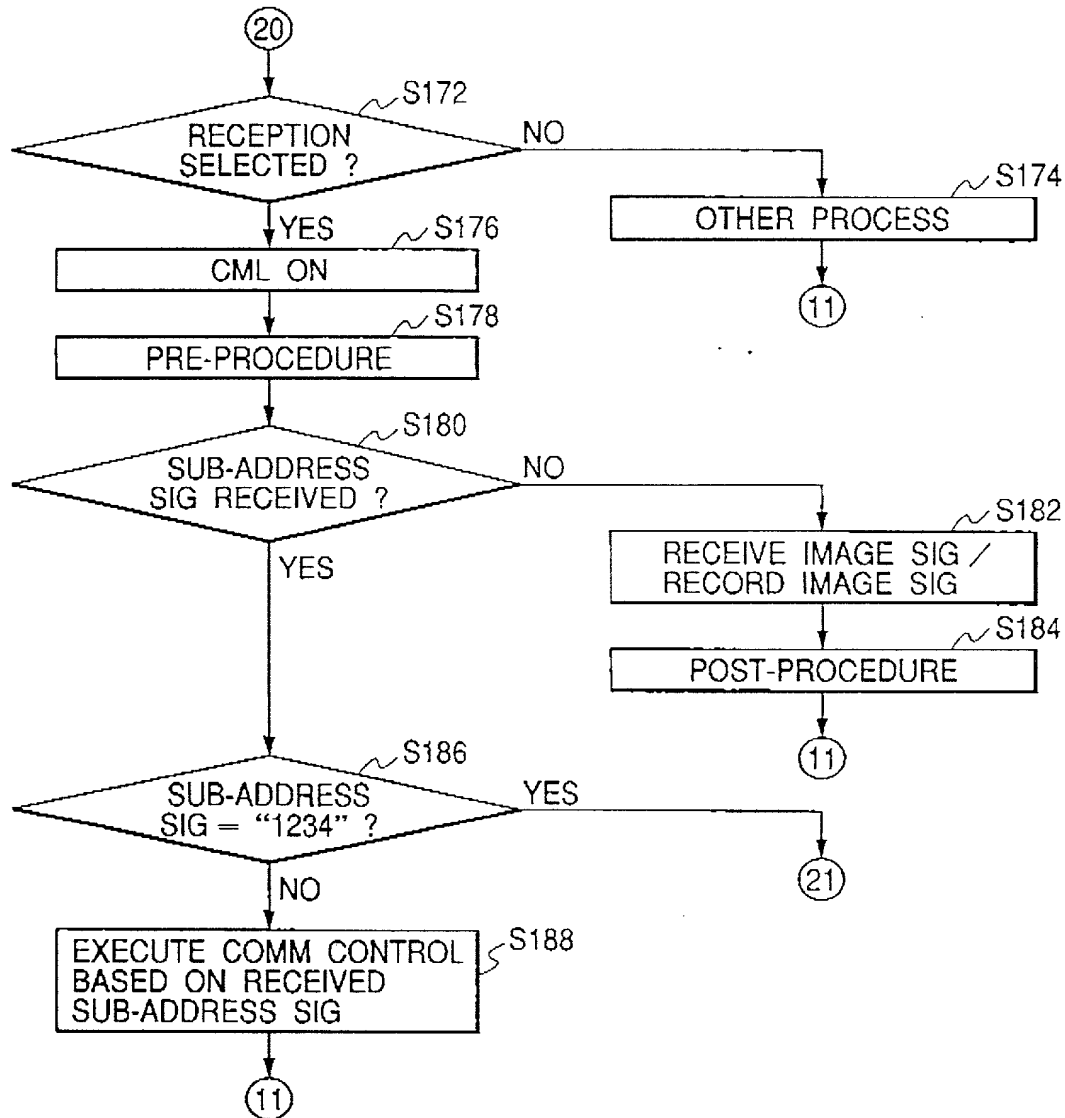


FIG. 18

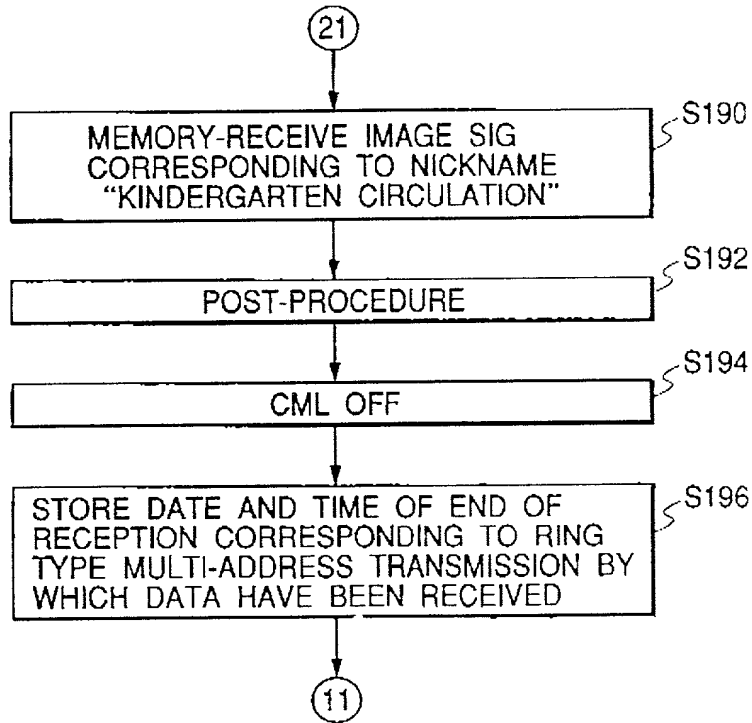
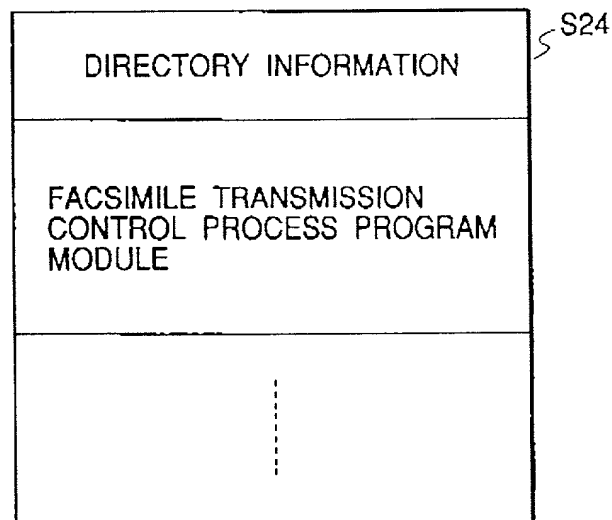


FIG. 19



COMBINED DECLARATION AND POWER OF ATTORNEY  
FOR PATENT APPLICATION

(Page 1)

As a below named inventor, I hereby declare that.

My residence, post office address and citizenship are as stated below next to my name

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled \_\_\_\_\_

COMMUNICATION APPARATUS

the specification of which ☒ is attached hereto ☐ was filed on \_\_\_\_\_ as United States  
Application No. or PCT International Application No. \_\_\_\_\_  
and was amended on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR §1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or § 365(b), of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT international application which designates at least one country other than the United States, listed below and have also identified below any foreign application for patent or inventor's certificate, or PCT international application having a filing date before that of the application on which priority is claimed

<u>Country</u>	<u>Application No.</u>	<u>Filed (Day/Mo/Yr)</u>	<u>(Yes/No)</u> <u>Priority Claimed</u>
Japan	11-176118	June 22, 1999	Yes
Japan	11-217787	July 30, 1999	Yes

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or § 365(c) of any PCT international application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application

<u>Application No.</u>	<u>Filed (Day/Mo/Yr)</u>	<u>Status (Patented, Pending, Abandoned)</u>
N/A		

I hereby appoint the practitioners associated with the firm and Customer Number provided below to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith, and direct that all correspondence be addressed to the address associated with that Customer Number:

**FITZPATRICK, CELLA, HARPER & SCINTO**  
Customer Number: 05514

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of Sole or First Inventor TAKEHIRO YOSHIDA

Inventor's signature \_\_\_\_\_

Date \_\_\_\_\_ Citizen/Subject of Japan

Residence 29-7, Uehara 1-chome, Shibuya-ku, Tokyo, Japan

Post Office Address c/o Canon Kabushiki Kaisha,

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, Japan

(Page 2)

Second Inventor's signature \_\_\_\_\_

Residence 1-8-S101, Hatori 3-chome, Fujisawa-shi, Kanagawa-ken,

Japan

Post Office Address c/o Canon Kabushiki Kaisha,

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, Japan

Table 1. Demographic characteristics of the study population	
Age (years)	65.5 ± 1.2
Gender	Male 58.5%
Education	High school 45.5%
Occupation	Retired 45.5%
Marital status	Married 55.5%
Family size	2.5 ± 0.5
Income (TL/month)	1500 ± 200
Health status	Good 65.5%
Smoking status	Smoker 35.5%
Alcohol consumption	Alcohol 15.5%
Comorbidities	Hypertension 45.5%
Diabetes mellitus	Diabetes 15.5%
Chronic kidney disease	CKD 10.5%
Heart failure	Heart failure 5.5%
Coronary artery disease	CAD 10.5%
Stroke	Stroke 5.5%
Other	Other 10.5%